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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/839,257	04/20/2001	Brian D. Earl	WEI0026.1	1537

27187 7590 06/19/2002

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EXAMINER

SOWARD, IDA M

ART UNIT	PAPER NUMBER
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2822

DATE MAILED: 06/19/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/839,257

Applicant(s)

EARL, BRIAN D.

Examiner

Ida M Soward

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 20 April 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 April 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5 & 7.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## DETAILED ACTION

This office action is in response to the application filed on April 20, 2001.

### *Drawings*

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "**112**" has been used to designate both **pressure application member** and **rocker arm**. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2 are rejected under 35 U.S.C. 102(b) as being anticipated by Kawabe (5,609,497).

Kawabe teaches an integrated circuit socket, having: a base **15**; a plurality of electrical contacts **19** in the base; a pressure application subassembly **20-28** including a plurality of pressure application members for applying downward force on an integrated

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circuit wherein, the pressure assemble members are spring loaded **27 & 28**; and a latching assembly **22 & 23**.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-5 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawabe (5,609,497) as applied to claims 1-2 above, and further in view of Savant (5,288,240).

Kawabe teaches all mentioned in the rejection above. However, Kawabe fails to teach rocker arms. Savant teach rocker arms 51 having surfaces for applying pressure (Figure 1, col. 4, lines 27-46). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the structure of Kawabe with the rocker arms of Savant to improve the socket assembly.

Claims 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawabe (5,609,497) as applied to claims 1-2 above, and further in view of Nakano (4,515,425).

Kawabe teaches all mentioned in the rejection above. However, Kawabe fails to teach truss members connected to a base. Nakano teaches truss members **6**

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connected to a base **1** wherein, the pressure application members **8-10** are connected to the truss members (Figure 2). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the structure of Kawabe with the truss members of Nakano so that the engagement and disengagement of the IC package pressing means can be rapidly carried out.

Claims 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawabe (5,609,497) and Nakano (4,515,425) as applied to claims 1-2 and 6-7 above, and further in view of Noriyuki (5,447,448).

Kawabe and Nakano teach all mentioned in the rejections above. Kawabe further teaches a biasing spring member (claim 1). However, Kawabe and Nakano fail to teach removable pressing pads. Noriyuki teach removable pressing pads including at least one cavity **6** (Figure 1, cols. 2-3, lines 12-68 and 1-11, respectively). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the structure of Kawabe and the truss members of Nakano with the removable pressing pads of Noriyuki to provide an IC socket in which the service life can be prolonged.

Claims 12 and 15-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsubota (5,807,118) in view of Hopfer et al. (5,761,036).

Tsubota teaches an integrated circuit socket, including: a base **1**; a first plated (connected to springs) connected to the base; a second plate (under **6**) connected to

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the base; and a latch subassembly **9 & 10** movable between an open position and a closed position and wherein movement from the open position to the closed position causes the first and second plates to move so as to contact an integrated circuit **6** in the socket, thereby positioning the integrated circuit; first and second alignment means **5** and the upper center portion of the base **1**; a pair of stationary members (pins below **1**) (Figures 2-3, cols. 2-3, lines 47-67 and 1-6). Tsubota further teaches a first pair of locators connected to the base (springs) and a second pair of locators **8** connected to the second plate and wherein the second pair of locators contacts the integrated circuit as the latch subassembly is moved from the open position to the closed position thereby aligning the integrated circuit along one edge. However, Tsubota fails to teach a pair of flexible arms. Hopfer et al. teach a pair of flexible arms **72 & 74** (Figure 1, col. 7, lines 37-56). Hopfer et al. further teach the arms contact the integrated circuit **32** and align it about its centerline. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the structure of Tsubota with the flexible arms of Hopfer et al. to increase efficiency in securing the socket assembly.

Claims 13-14 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsubota (5,807,118) and Hopfer et al. (5,761,036) as applied to claim 12 above, and further in view of Savant (5,288,240).

Tsubota and Hopfer et al. teach all mentioned in the rejections above. However Tsubota and Hopfer et al. fail to teach camming members. Savant teaches camming members **50** connected to base **20** (Figure 5., col. 4, lines 27-41). Therefore, it would

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have been obvious to one having ordinary skill in the art at the time the invention was made to modify the structure of Tsubota and the flexible arms of Hopper et al. with the camming members of Savant to simplify manufacturability.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents are cited to further show the state of the art with respects to integrated circuit sockets:

Barabi et al. (US 6,354,859 B1)

Maeda (6,152,744)

McHugh et al. (5,688,140)

Uratsuji (5,374,197).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ida M Soward whose telephone number is 703-305-3308. The examiner can normally be reached on Monday - Friday, 7:30 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Whitehead, Jr. can be reached on 703-308-4940. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7722 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

ims  
June 14, 2002

  
CARL WHITEHEAD, JR.  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800